Roll No											

PRESIDENCY UNIVERSITY
BENGALURU

SCHOOL OF INFORMATION SCIENCE

Make up Examinations –December 2025

Semester : MK
Course Code : CSA2006
Course Name : Fundamentals of Software Engineering
Program : BCA

Date : 29 –12-2025
Time : 09:30am – 12:30pm
Max Marks : 100
Weightage : 50%

Instructions:
(i) Read all questions carefully and answer accordingly.
(ii) Question paper consists of 3 parts.
(iii) Scientific and non-programmable calculator are permitted.
(iv) Do not write any information on the question paper other than Roll Number.

PART A

ANSWER ALL THE FOLLOWING QUESTIONS **10 X 2 = 20M**

1. Define Swimlane Diagram (CO2) [Knowledge]

2. State the steps in essence of software engineering practice. (CO1) [Knowledge]

3. What is Risk management? (CO4) [Knowledge]

4. List the phases in Unified processing model. (CO1) [Knowledge]

5. Describe the Requirements for Quality function deployment (CO2) [Knowledge]

6. list any two challenges involved in agile software development? (CO1) [Knowledge]

7. Mention some of the major activities covered by software project management (CO4) [Knowledge]

8. State the Elements of Software Quality Assurance. (CO3) [Knowledge]

9. Define Design and Its features. (CO2) [Knowledge]

10. What are the objectives of testing?

(CO3) [Knowledge]

PART B

ANSWER ALL THE FOLLOWING QUESTIONS **5 X 10 = 50M**

11. Explain how does black box testing contribute to the overall software testing process?

(CO3) [Comprehension]

12. Give an Outline for the Risk Management using a neat diagram?

(CO4) [Comprehension]

13. Discusses about main advantages and potential challenges of using Agile methodologies in software development projects? Provide examples of situations or project types where Agile is particularly well-suited.

(CO1) [Comprehension]

14. Explain about **User Interface Design Process in detail**

(CO2) [Comprehension]

15. Draw Activity diagram for university admission process

(CO2) [Comprehension]

PART C

ANSWER ALL THE FOLLOWING QUESTIONS **2 X 15 = 30M**

16. Compute the Cyclomatic Complexity and draw the Control Flow Graph (CFG) for the following code:

```
min = A[0];
 I = 1;
 while (I < N) {
        if (A[I] < min)
      min = A[I];
    I = I + 1;
 }
 print min
```

Also, Compute the Cyclomatic Complexity of the resultant CFG of the above code through three different formulas and list out the number of paths

(CO3) [Application]

17. Explain about software development life cycle (SDLC) models, and why are they important in software development projects? Compare and contrast the waterfall model and the iterative model, highlighting their key characteristics, advantages, and limitations.

(CO1) [Application]